

Application No. 09/402,633  
Reply to Office Action of April 7, 2004

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-58 are pending, with Claim 55 amended by the present amendment.

In the Office Action, Claim 55 was objected to; Claims 1-15, 17-20, 26-42 and 47-58 were rejected under 35 U.S.C. §102(e) as being unpatentable over Malomsoky et al. (U.S. Patent No. 5,872,918, hereinafter Malomsoky); Claims 21-25 and 43-46 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Malomsoky and in view of Ngami et al. (U.S. Patent No. 5,835,710, hereinafter Ngami); and Claim 16 was indicated as containing allowable subject matter.

Applicants acknowledge with appreciation the indication of allowable subject matter.

Claim 55 is amended to recite the features of Claim 26. No new matter is added.

Briefly recapitulating, Claim 1 is directed to a method of management in a circuit-switched communication network (1). The method is performed on, or with the aid of, at least one programmable device (10) connected to the network (1). The method comprises a step of computing (202) and storing (203) in an electronic memory (1018, 1020) a representation of the network based on B-blocking islands ( $N_i$ ). Each B-blocking island consists of a maximal set of nodes (A-G) linked in a such a way that at least one route with at least an amount B of concave resources exists between any pair of nodes in the set at the time t. As defined in Applicants' originally filed specification, *a B-blocking island is a grouping of subsets of nodes assigned to a distributed agent.*<sup>1</sup> As defined in Applicants' originally filed specification, *a link I is said to be concave if for any path p over the links {I<sub>1</sub>, ..., I<sub>t</sub>, ..., I<sub>p</sub>},  $\mu(p) = \min \mu(I_i)$ .*<sup>2</sup> This method of grouping nodes simplifies and allows improved routing of

<sup>1</sup> Specification, page 10, lines 20-30.

<sup>2</sup> Specification, page 24, lines 14-16.

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demands, network pricing, network analyzing, and network management.<sup>3</sup> Independent Claims 26, 48, and 52-58 are directed to alternative embodiments of Applicants' invention, each reciting a B-blocking island comprising a maximal set of nodes (A-G) linked in a such a way that at least one route with at least an amount B of concave resources exists between any pair of nodes in the set at the time t.

Malomsoky discloses a system and method for allocating limited transmission resources to various virtual paths defined on top of a physical network.<sup>4</sup> The network may be an ATM network where virtual channels with common properties are grouped together in bundles that can be transported, processed, and managed as one group.<sup>5</sup> Flow enforcement nodes are located at the edges of the network to protect against overflows.<sup>6</sup> Cross-connect nodes may provide additional services.<sup>7</sup> The ATM network can be overlaid upon a SDH-based layered transport network.<sup>8</sup> Malomsoky further discloses dimensioning virtual paths, where a load to be balanced is the value of an appropriately chosen blocking measure (Entropy Rate Function).<sup>9</sup> Blocking on each the virtual paths is distributed in as uniform a manner as possible.<sup>10</sup> The process starts by assembling the virtual paths to be dimensioned into a virtual path dimensioning set.<sup>11</sup> After the initialization step, recursive steps are performed to find a solution for optimally distributed virtual paths.<sup>12</sup>

However, Malomsoky does not disclose or suggest a B-blocking island let alone a network based on B-blocking islands (N<sub>i</sub>) as recited in Applicants' Claim 1. Malomsoky also does not disclose or suggest use of concave resources, let along linking nodes "in a such a

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<sup>3</sup> Specification, page 10, line 30 – page 11, line 9.

<sup>4</sup> Malomsoky, abstract.

<sup>5</sup> Malomsoky, column 7, lines 29-36.

<sup>6</sup> Malomsoky, column 8, lines 55-57.

<sup>7</sup> Malomsoky column 8, lines 59-61.

<sup>8</sup> Malomsoky, column 9, lines 10-12; Figure 7.

<sup>9</sup> Malomsoky, column 12, line 3.

<sup>10</sup> Malomsoky, column 12, line 8.

<sup>11</sup> Malomsoky, column 20, line 21.

<sup>12</sup> Malomsoky, column 20, line 61.

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way that at least one route with at least an amount B of concave resources exists between any pair of nodes in the set at the time t" as recited in Applicants' Claim 1. Because there is no suggestion or description of B-blocking islands or concave resources in Malomsoky, Applicants submit that Malomsoky does not anticipate the invention recited in Applicants' Claim 1.

Applicants have also considered the Ngami reference and submit that Ngami does not cure the deficiencies of Malomsoky. As none of the cited prior art, individually or in combination, disclose or suggest all the elements of independent Claim 1, Applicants submit the inventions defined by Claim 1, and all claims depending therefrom, are not anticipated and are not rendered obvious by the asserted prior art for at least the reasons stated above.<sup>13</sup> For at least the reason listed above, Applicants also submit that the inventions recited in independent Claims 26, 48, and 52-58, and all claims depending therefrom, are also not anticipated and are not rendered obvious by the cited references.

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<sup>13</sup> MPEP § 2142 "...the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

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Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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